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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,142	11/29/2000	Kevin A. McCullough	P00372-US1	6552

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EXAMINER

LEE, EDMUND H

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,142

Applicant(s)

MCCULLOUGH ET AL.

Examiner

EDMUND H. LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/10/04 has been entered.

2. Claims 9-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims introduce new matter into the disclosure. The added material which is not supported by the original disclosure is as follows:

a. the phrase "electrically insulative PITCH based carbon filler" (cl 9, ln 4) lacks support in the instant specification. There is no mention of using electrically insulative PITCH based carbon filler.

Correction is required.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deakyne et al (USPN H1332) in view of Nakagawa (USPN 5100726) and Hood, III et al (USPN 6049469). In regard to claim 9, Deakyne et al teach the basic claimed process including a method of forming a thermally conductive part for dissipating heat away from a heat generating object (col 1, Ins 13-16 and 65-67; col 2, Ins 11-14, 35-40, 48-52); providing a base thermoplastic polymer matrix (col 1, Ins 13-16 and 65-67; col 2, Ins 11-14, 35-40, 48-52); mixing a thermally conductive, electrically insulative pitch based carbon filler material into the base thermoplastic polymer matrix to form a thermally conductive, electrically insulative composite material (col 1, Ins 13-16 and 65-67; col 2, Ins 11-14, 35-40, 48-52); and injection molding a part from the thermally conductive composite material into a net shape molded configuration, the part including an outer surface and a contact interface for flush thermal communication with a heat generating object (col 1, Ins 13-16 and 65-67; col 2, Ins 11-14, 35-40, 48-52). Deakyne et al, however, do not teach a contact interface that is in direct contact with the heat generating object; and plating a metallic coating over the outer surface of the part. Hood, III et al teach a well-known design of a heat dissipating and electromagnetic shielding 201 for an integrated circuit (heat generating object) wherein the shielding is in direct contact with the heat generating object (figs 2 and 3). Deakyne et al and Hood, III et al are combinable because they are analogous with respect to shield for electronic components. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mold the housing of Deakyne et al with the shield design of Hood, III et al in order to use the housing with integrated circuits. Nakagawa

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teaches forming a thermally conductive part from a composite material of thermally conductive filler and base thermoplastic polymer (col 2, lns 17-23; col 2, ln 62-col 3, ln 5); and plating a metallic coating over the entire outer surface of the part (col 2, lns 17-23; col 2, ln 62-col 3, ln 5). Deakyne et al and Nakagawa are combinable because they are analogous with respect to injection molding a thermally conductive part from a thermally conductive composite material. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to plate the outer surface of the part of Deakyne et al as taught by Nakagawa in order to enhance the part's shielding ability. In regard to claim 10, such is taught by the above combined teachings of Deakyne et al and Nakagawa.

5. Applicant's arguments with respect to claims 9 and 10 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571.272.1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EDMUND H. LEE
Primary Examiner
Art Unit 1732

EHL


9/7/04